

Attorney Docket No.: 0180147

In the Claims:

Claims 1-13 (canceled)

1 Claim 14 (original): A method for forming a contact over a silicide layer situated in a semiconductor die, said method comprising steps of:

depositing a barrier layer on sidewalls of a contact hole and on a native oxide layer situated at a bottom of said contact hole, said sidewalls being defined by said contact hole in a dielectric layer, said native oxide layer being situated over said silicide layer;

removing said native oxide layer situated over said silicide layer at said bottom of said contact hole by utilizing a sputter etch/deposition process.

2 Claim 15 (original): The method of claim 14 wherein said step of removing said native oxide layer situated over said silicide layer at said bottom of said contact hole comprises simultaneously sputter etching said barrier layer and said native oxide layer and depositing titanium/titanium nitride on said barrier layer.

3 Claim 16 (original): The method of claim 14 wherein said sputter etch/deposition process has a sputter etch/deposition ratio greater than 1.0.

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4 Claim 17 (original): The method of claim 14 wherein said dielectric layer comprises top corner regions situated adjacent to said contact hole, wherein said sputter etch/deposition process does not etch said top corner regions of said dielectric layer.

5 Claim 18 (original): The method of claim 14 wherein said contact hole has an electrical contact width, wherein said electrical contact width is not increased by said sputter etch/deposition process.

6 Claim 19 (original): The method of claim 14 wherein said sputter etch/deposition process comprises an argon sputter etch.

7 Claim 20 (original): The method of claim 14 wherein said dielectric layer comprises PECVD oxide.

8 Claim 21 (new): A method for forming a contact over a silicide layer situated in a semiconductor die, said method comprising steps of:

depositing a barrier layer on sidewalls of a contact hole and on a native oxide layer situated at a bottom of said contact hole, said sidewalls being defined by said contact hole in a dielectric layer;

removing a portion of said barrier layer and said native oxide layer situated at said bottom of said contact hole to expose said silicide layer, wherein said step of depositing

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said barrier layer on said sidewalls of said contact hole is optimized such that said barrier layer has a greater thickness at a top of said contact hole than a thickness at said bottom of said contact hole.